

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): Method of controlling a welding apparatus (1), whereby individual welding parameters, such as a current intensity, a rod feed rate, a welding process, a frequency and/or pulse time of a welding current etc., for example, can be are set by the user in the form of a welding job (35 to 39) for a specific welding process by means of a first control unit (22) hard-wired to or integrated in the welding apparatus (1), and several such welding jobs (35 to 39) can be are stored in a memory device (28) and, by selecting a welding job (35 to 39) using the first control unit (22), the welding apparatus (1) and the or components of the a welding system, such as a power component (3), a rod feed system or a rod feed device (11) etc., for example, can be activated on the basis of are controlled according to the parameters stored therein by means of a control system (4), in particular a microprocessor controller (27) the memory device, and when a second control unit (29) is operated, in particular by activating a push-button element (30) of a second control unit disposed on the welding torch (10), a

start signal is sent to the control system (4) in order to initiate the welding operation, wherein the several welding jobs are stored in the memory device in a defined sequence so that the operator chooses his designated welding job by creating start signal or a control signal in a standardized control sequence, whereby said control signal is generated created by the push-button element (30) of the second control unit (29), in other words of the welding torch (10), and before starting the welding operation, a selection or switch is made between the individual stored thereby one of the welding jobs, stored in the memory device, is chosen by the operator by switching through the welding jobs, stored in the memory device, or alternatively the operator uses the previously chosen welding job, and afterwards a (35 to 39) by means of the control signal and/or the start-up of the welding operation can be run by generating the start signal is created by via the same push-button element (30) of the second control unit which starts the welding operation.

Claim 2 (Currently Amended): Method according to claim 1, wherein the parameters for an individual welding job (35 to 39) are organized in parameter groups (34) and the different welding jobs (35 to 39) are stored in the memory device (28) in a fixed sequence.

Claim 3 (Currently Amended): Method according to claim 1, wherein the welding jobs ~~(35 to 39)~~ are stored in the memory device ~~(28)~~ so that they are clearly identified.

Claim 4 (Currently Amended): Method according to claim 1, wherein the welding jobs ~~(35 to 39)~~ are organized in individual job groups ~~(41, 42)~~ from which at least one welding job ~~(35 to 39)~~ can be is retrieved.

Claim 5 (Currently Amended): Method according to claim 1, wherein the job groups ~~(41, 42)~~ containing one or more welding jobs ~~(35 to 39)~~ are stored in the memory device ~~(28)~~ so that they are separated from one another by means of empty groups ~~(40)~~ or empty jobs, in other words a welding job ~~(35 to 39)~~ in which no parameters have been set.

Claim 6 (Currently Amended): Method according to claim 1, wherein at the end of a job group ~~(41, 42)~~, the last welding job ~~(35 to 39)~~ is stored in the memory device ~~(28)~~ with an indicator for a separator signal.

Claim 7 (Currently Amended): Method according to claim 1, wherein the curve of the output signal of the push-button, in particular the push-button element ~~(30)~~, is used to define the control signal and the start signal on the basis of its frequency and/or or its duration.

Claim 8 (Currently Amended): Method according to claim 7, wherein a comparison is run between the output signal generated by the push-button or push-button element ~~(30)~~ and several possible control signals previously set up in the memory device ~~(28)~~ and the start signal on the basis of their frequency and/or or their duration.

Claim 9 (Currently Amended): Method according to claim 1, wherein the start signal for starting the welding process is defined by a longer depression of the push-button than the control signal for selecting the welding job ~~(35 to 39)~~.

Claim 10 (Currently Amended): Method according to claim 9, wherein, on an appropriate control signal, in particular if the push-button element ~~(30)~~ is depressed for a shorter time, the next welding job ~~(35 to 39)~~ in the sequence is selected from the memory device ~~(28)~~.

Claim 11 (Currently Amended): Method according to claim 9, wherein, on an appropriate control signal, after the last welding job ~~{35 to 39}~~ stored in the memory device ~~{28}~~, the first welding job ~~{35 to 39}~~ stored in this job group ~~{41, 42}~~ is selected.

Claim 12 (Currently Amended): Method according to claim 9, wherein, on an appropriate control signal, in particular if the push-button element ~~{30}~~ is depressed for a medium length of time, the next job group ~~{41, 42}~~ in the sequence after the last empty group ~~{40}~~ or empty job is selected from the memory device ~~{28}~~.

Claim 13 (Currently Amended): Method according to claim 9, wherein, on an appropriate control signal, the next job group ~~{41, 42}~~ in the sequence after the preceding empty group ~~{40}~~ is selected from the memory device ~~{28}~~.

Claim 14 (Currently Amended): Method according to claim 9, wherein, on an appropriate control signal, the first job group ~~{41, 42}~~ stored in the memory device ~~{28}~~ is selected.

Claim 15 (Currently Amended): Method according to claim 1, wherein any number of jobs ~~(35 to 39)~~ can be are defined by the user in a job group ~~(41, 42)~~, and likewise any number of job groups ~~(41, 42)~~ with a different number of welding jobs ~~(35 to 39)~~ stored in them ~~can be~~ are set by the user.

Claim 16 (Currently Amended): Method according to claim 1, wherein a check is run on the selected welding jobs ~~(35 to 39)~~ by the microprocessor controller ~~(27)~~ to ensure that threshold values of the individual parameters have been complied with and a visual and/or or acoustic warning ~~is~~ message is emitted by the first and/or or second control unit ~~(22, 29)~~ if necessary.

Claim 17 (Currently Amended): Method according to claim 1, wherein the parameters or the parameter group ~~(21)~~ of the respective welding job ~~(35 to 39)~~ selected are displayed by the first and/or or second control unit ~~(22, 29)~~.

Claim 18 (Currently Amended): Method according to claim 1, wherein during a welding operation, a selection and switch ~~can be~~ are made between the individual welding jobs ~~(35 to 39)~~ by means of the control signal generated by the second control unit ~~(29)~~.

Claim 19 (Currently Amended): Control system ~~(4)~~ for a welding apparatus, comprising a first control unit ~~(22)~~, a microprocessor controller ~~(27)~~, comprising a memory device ~~(28)~~ and a power component ~~(3)~~, and the different parameters ~~can be~~ are set in the form of welding jobs ~~(35 to 39)~~ by means of the first control unit ~~(22)~~ and the welding apparatus ~~(1)~~ ~~can be is~~ activated by the power component ~~(3)~~ on the basis of these parameters, and a second control unit ~~(29)~~ on which a push-button element ~~(30)~~ is disposed for generating a start signal, in particular for running the method according to claim 1, is provided on the welding torch ~~(10)~~ of the welding apparatus ~~(1)~~ which is hard-wired to the microprocessor controller ~~(27)~~, wherein the microprocessor controller ~~(27)~~ has an element ~~(32)~~ for evaluating a control signal generated by the second control unit ~~(29)~~ before starting the welding operation, and the second control unit ~~(29)~~ for switching the welding jobs ~~(35 to 39)~~ and for starting the welding process is nothing more than the push-button element ~~(30)~~.

Claim 20 (Currently Amended): Control system ~~(4)~~ according to claim 19, wherein the parameters for the welding jobs ~~(35 to 39)~~ are stored in the memory device ~~(28)~~ in parameter groups ~~(21)~~.

Claim 21 (Currently Amended): Control system (4) according to claim 19, wherein the individual welding jobs ~~(35 to 39)~~ are separated from one another by empty groups ~~(40)~~.

Claim 22 (Currently Amended): Control system ~~(4)~~ according to claim 1, wherein the second control unit ~~(29)~~ has a visual ~~and/or or~~ acoustic output device ~~(33)~~ for warning messages ~~and/or or~~ information.

Claim 23 (Currently Amended): Control system ~~(4)~~ according to claim 22, wherein the visual output device ~~(33)~~ is provided in the form of one or more control lamps, ~~for example LEDs~~.

Claim 24 (Currently Amended): Control system ~~(4)~~ according to claim 22, wherein the visual output device ~~(33)~~ is provided in the form of a display, ~~for example an LED~~.

Claim 25 (Currently Amended): Control system ~~(4)~~ according to claim 1, wherein the second control unit ~~(29)~~, in particular the welding torch ~~(10)~~, is connected to the control system ~~(4)~~ via a two-terminal electric cable.

Claim 26 (Currently Amended): Control system ~~(4)~~ according to claim 19, wherein the first control unit ~~(22)~~ has an input device, ~~for example in the form of a key pad~~, as well as a visual ~~and/or or~~ acoustic output device, ~~for example in the form of a display~~, for warning messages ~~and/or or~~ information and is hard-wired to the microprocessor controller ~~(1-5)~~.

Claim 27 (Currently Amended): Control system ~~(4)~~ according to claim 19, wherein the first control unit ~~(22)~~ and the microprocessor controller ~~(27)~~ are provided in the form of a standard computer, separate from the welding apparatus ~~(1)~~, via an appropriate interface.

Claim 28 (Previously Presented): Use of the method according to claim 1 as a means of controlling a MIG, MAG or WIG welding apparatus.